

# EXHIBIT 5

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:	)	Attorney Ref.: GOOG-0244-US-CON -03
	)	
Inventor: Ian MacGillivray	)	Examiner: Tuankhahn D. Phan
	)	
Application No.: 18/244,158	)	Group Art Unit: 2154
	)	
Filed: September 8, 2023	)	Confirmation No.: 4895
	)	
For: SEARCH RESULT FILTERS	)	
FROM RESOURCE CONTENT	)	

**Mail Stop AMENDMENT**  
Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

**REPLY TO NON-FINAL OFFICE ACTION**

The following amendments and remarks are submitted in response to the Office Action mailed October 1, 2024, in the above-referenced patent Application. The Applicant's attorney thanks the Examiner for the examination.

**LISTING OF THE CLAIMS** begins on page 2.

**REMARKS** begin on page 8.

**LISTING OF THE CLAIMS**

1. (cancelled)
2. (previously presented) A method implemented by one or more processors, the method comprising:
  - determining a set of queries that are related to a first query;
  - determining, based on the set of queries that are related to the first query, a set of candidate filters, the set of candidate filters comprising informational terms in the set of queries that are related to the first query;
  - determining, for each candidate filter in the set of candidate filters, a quality score for the candidate filter, the quality score for the candidate filter being based on one or more attributes of the candidate filter in a set of resources that are determined to be responsive to the first query; and
  - selecting, from the set of candidate filters, based on the respective quality score for each candidate filter in the set of candidate filters, a set of query filters for the first query.
3. (previously presented) The method according to claim 2, further comprising providing, in response to the first query, for display on a user device and with content results that identify content in the set of resources, the set of query filters for the first query.
4. (previously presented) The method according to claim 3, further comprising:
  - receiving a selection of a particular query filter of the set of query filters for the first query; and
  - in response to receiving the selection of the particular query filter of the set of query filters, providing, for display on the user device, a filtered set of content that identifies a set of content results for the particular query filter that is

different from an unfiltered set of content results, and that is a proper subset of the unfiltered set of content results.

5. (previously presented) The method according to claim 2, wherein determining the set of queries that are related to the first query is based on the set of resources that are determined to be responsive to the first query.

6. (previously presented) The method according to claim 2, wherein the set of candidate filters excludes stop terms in the set of queries that are related to the first query.

7. (previously presented) The method according to claim 2, wherein the one or more attributes of the candidate filter in the set of resources that are determined to be responsive to the first query, used in determining the quality score for the candidate filter, comprise locations of the candidate filter in the set of resources that are determined to be responsive to the first query.

8. (previously presented) The method according to claim 7, wherein, in determining the quality score, a first candidate filter that appears in a more prominent location in one or more resources in the set of resources is assigned a higher quality score than a second candidate filter that appears in a less prominent location in the one or more resources in the set of resources.

9. (previously presented) The method according to claim 2, wherein the one or more attributes of the candidate filter in the set of resources that are determined to be responsive to the first query, used in determining the quality score for the candidate filter, comprise a frequency of occurrence of the candidate filter in the set of resources that are determined to be responsive to the first query.

10. (previously presented) The method according to claim 2, wherein the set of query filters for the first query is a proper subset of the set of candidate filters.

11. (previously presented) The method according to claim 2, wherein selecting the set of query filters for the first query is further based on diversity of respective filtered sets of content resulting from applying respective candidate filters to the set of resources.

12. (previously presented) The method according to claim 2, further comprising:

for each candidate filter in the set of candidate filters, applying the candidate filter to the set of resources to obtain a respective filtered set of resources; and

grouping, into a single candidate filter, a pair of candidate filters in the set of candidate filters for which the respective filtered sets of resources satisfy a similarity threshold,

wherein the single candidate filter is included in the set of query filters for the first query.

13. (previously presented) A computer program product comprising one or more computer-readable storage media having program instructions collectively stored on the one or more computer-readable storage media, the program instructions executable to:

determine a set of queries that are related to a first query;

determine, based on the set of queries that are related to the first query, a set of candidate filters, the set of candidate filters comprising informational terms in the set of queries that are related to the first query;

determine, for each candidate filter in the set of candidate filters, a quality score for the candidate filter, the quality score for the candidate filter being based on one or more attributes of the candidate filter in a set of resources that are determined to be responsive to the first query; and

select, from the set of candidate filters, based on the respective quality score for each candidate filter in the set of candidate filters, a set of query filters for the first query.

14. (previously presented) The computer program product according to claim 13, wherein the program instructions are further executable to provide, in response to the first query, for display on a user device and with content results that identify content in the set of resources, the set of query filters for the first query.

15. (previously presented) The computer program product according to claim 14, wherein the program instructions are further executable to:

receive a selection of a particular query filter of the set of query filters for the first query; and

in response to receiving the selection of the particular query filter of the set of query filters, provide, for display on the user device, a filtered set of content that identifies a set of content results for the particular query filter that is different from an unfiltered set of content results, and that is a proper subset of the unfiltered set of content results.

16. (previously presented) The computer program product according to claim 13, wherein determining the set of queries that are related to the first query is based on the set of resources that are determined to be responsive to the first query.

17. (previously presented) The computer program product according to claim 13, wherein the set of candidate filters excludes stop terms in the set of queries that are related to the first query.

18. (previously presented) The computer program product according to claim 13, wherein the one or more attributes of the candidate filter in the set of resources that are

determined to be responsive to the first query, used in determining the quality score for the candidate filter, comprise locations of the candidate filter in the set of resources that are determined to be responsive to the first query.

19. (previously presented) The computer program product according to claim 18, wherein, in determining the quality score, a first candidate filter that appears in a more prominent location in one or more resources in the set of resources is assigned a higher quality score than a second candidate filter that appears in a less prominent location in the one or more resources in the set of resources.

20. (previously presented) The computer program product according to claim 13, wherein the one or more attributes of the candidate filter in the set of resources that are determined to be responsive to the first query, used in determining the quality score for the candidate filter, comprise a frequency of occurrence of the candidate filter in the set of resources that are determined to be responsive to the first query.

21. (previously presented) The computer program product according to claim 13, wherein the set of query filters for the first query is a proper subset of the set of candidate filters.

22. (previously presented) A system comprising:

a processor, a computer-readable memory, one or more computer-readable storage media, and program instructions collectively stored on the one or more computer-readable storage media, the program instructions executable to:

determine a set of queries that are related to a first query;

determine, based on the set of queries that are related to the first query, a set of candidate filters, the set of candidate filters comprising informational terms in the set of queries that are related to the first query;

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determine, for each candidate filter in the set of candidate filters, a quality score for the candidate filter, the quality score for the candidate filter being based on one or more attributes of the candidate filter in a set of resources that are determined to be responsive to the first query; and

select, from the set of candidate filters, based on the respective quality score for each candidate filter in the set of candidate filters, a set of query filters for the first query.



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### **REMARKS**

These remarks are responsive to the Office Action mailed on October 1, 2024, (“the Office Action”). The Applicant’s attorney thanks the Examiner for the examination of the above-referenced Application.

### **Status of the Claims**

At the time of the Office Action, claims 2-22 were pending, with claims 2-22 being rejected. No new matter is being submitted.

### **Double Patenting Rejection(s)**

The Office Action provisionally rejects claims 2-22 on the ground of nonstatutory obviousness-type double patenting as allegedly being unpatentable over claims 1-20 of U.S. Patent No. 11,797,626 and claims 1-19 of U.S. Patent No. 11,372,941 and 10,242,112. Office Action, p. 3.

Applicant’s attorney respectfully requests this rejection be held in abeyance until allowable subject matter is indicated.

### **35 U.S.C. § 101 Rejection**

Claims 13-22 stand rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Office Action, p. 3.

Applicant’s attorney respectfully requests reconsideration of the 101 rejection. For example, the Applicant’s attorney requests that the examiner consider how to combination of claim elements can, for example, enable “improving the search engine system performance and saving users a large degree of human effort” by using “learned filters” to “narrow a user’s search query and lead a user closer towards their end goal” and enabling “a search engine system to provide search results in specific domains which vary not just with the categorical query but also with the results available at the time of the search” as set forth in the Specification, paragraph [0005].

### **35 U.S.C. § 103 Rejection**

Claims 2-22 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Zoryn et al., (hereinafter “Zoryn”) (U.S. Patent Publication No. 2016/0012052 in

view of Mills, et al., (hereinafter “Mills”) (U.S. Patent Publication No. 2013/0159348).  
Office Action, p. 4.

The Office Action, p. 4, alleges the following features of independent claim 2, as well as similar features of independent claims 13 and 22, are rendered obvious by para. [0078] of Zoryn:

*“determining, based on the set of queries that are related to the first query, a set of candidate filters, the set of candidate filters comprising informational terms in the set of queries that are related to the first query”*

However, Applicant’s attorney respectfully submits that the cited portions of Zoryn fail to render obvious the above features of claim 2.

For example, para. [0078] of Zoryn sets forth that a “keyword hit detector is configured to compile a list of tables”. A “ranking module” can “compute an approximate ranking score for any hit tables” and “filter out hit tables that have an insufficient approximate ranking score”. The “[r]emaining tables have a sufficient approximate ranking score and are considered candidate tables for returning in query results.”

However, Zoryn’s “ranking score” for “hit tables” that is used to “filter out hit tables” to determine which “hit tables” are “considered candidate tables for returning in query results” fails to teach or suggest claim 2s’ *“set of candidate filters”* that include *“informational terms in the set of queries that are related to the first query”* and are determined “based on the set of queries that are related to the first query”.

For at least these reasons, Applicant’s attorney respectfully requests that the 103 rejection of independent claims 2, 13, and 22 be withdrawn.

#### General Comments on the Dependent Claims

Because each of the dependent claims depends from a base claim that is believed to be in condition for allowance, Applicant’s attorney believes that it is unnecessary at this time to describe the allowability of each of the dependent claims individually. Applicant’s attorney does not, however, necessarily concur with the interpretation of any

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dependent claim as set forth in the Office Action, nor does Applicant's attorney concur that the basis for the rejection of any dependent claim is proper.

### **CONCLUSION**

The Applicant's attorney respectfully submits that the application is in condition for allowance, and reconsideration and notice of allowance are respectfully requested. If the Examiner believes that prosecution might be advanced by discussing the application with the Applicant's attorney, in person or over the telephone, the Applicant's attorney would welcome the opportunity to do so.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant's attorney hereby requests any necessary extension of time. If there is an additional fee occasioned by this response, please charge any deficiency to Deposit Account No. 506792.

Respectfully submitted,

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